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Stepping Stones
to
Health and Happiness

JAMES P. PURSELL, M. D.



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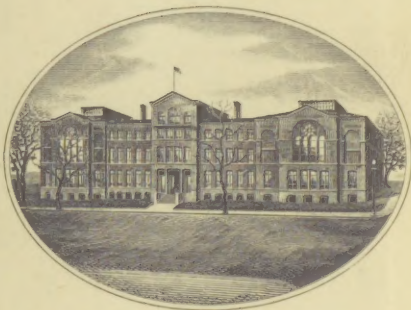


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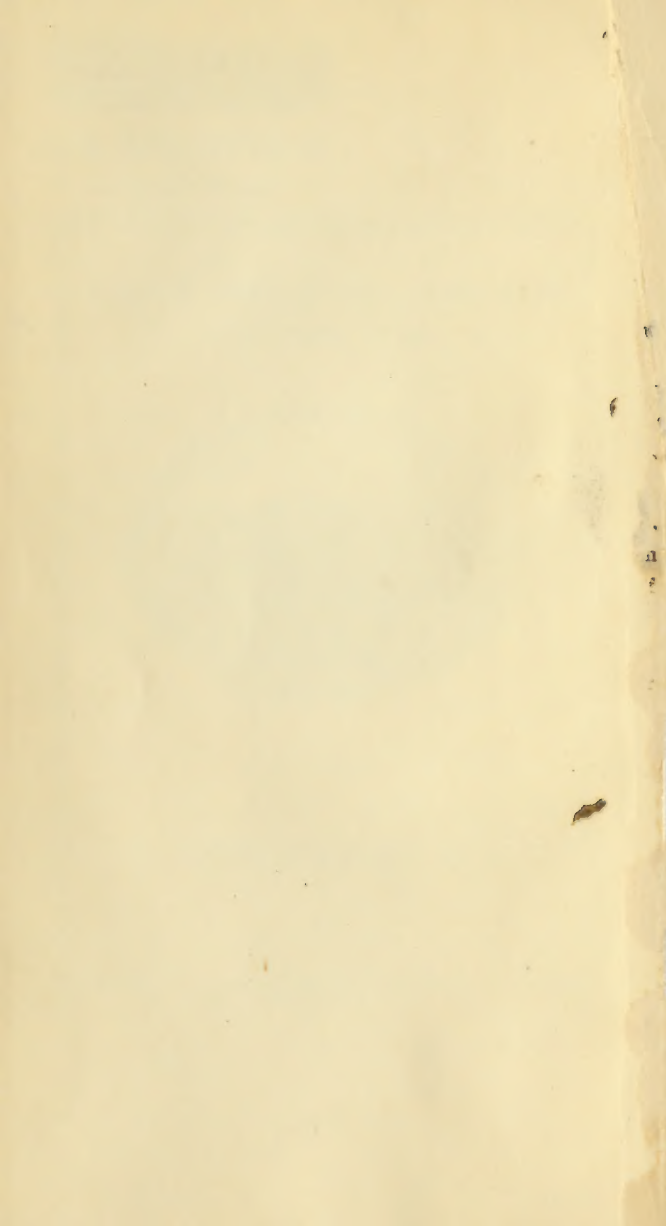
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NOTE—Dr. Pursell has at various times held the following positions:

Member of the Staff of The Ward's Island (N. Y.) Homeopathic Hospital; Resident Physician of Glen Mary Home, Owego, N. Y.; Interne at the State Hospital, Middletown, N. Y.; First Assistant Physician, Westboro State Hospital, Westboro, Mass.; Founder and Physician in Charge, Easton Sanitarium, Easton, Pa.; Member of the Staff of Physicians, Department of Neurology, Scranton Homeopathic Hospital, Scranton, Pa.; Physician in Charge, Grand View Sanitarium, and Organizer and Physician in Charge, Grand View Hospital, Sellersville, Pa.; in charge of the Scientific Department and Laboratory of one of the largest food manufacturers in the Middle West during the war, and Chemist for the City of Quincy, Ill., during same period.

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to

Health and Happiness

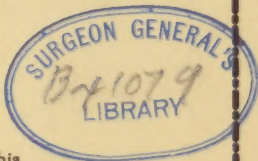
Suggestions as to the Proper Selection of
Foods and the Correct Method of
Preparing and Eating Them



By

JAMES P. PURSELL, M. D.

Who for fifteen years has given special
attention to food and its
relation to health



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DEDICATED TO MY WIFE

ROMAIN D. PURSELL

WHOSE PATIENCE AND PLUCK

THROUGH THE VICISSITUDES

OF LIFE HAVE BEEN AN

INSPIRATION

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Good diet with wisdom best comforteth
man.—*Tusser 1320.*

PREFACE

I have frequently been requested by patients to write and put into permanent form the information and instructions usually given to consultants, more especially that portion in reference to diet and environment.

Since the few pages that follow contain, of necessity, more extensive information than could possibly be given to any one consultant, I offer this treatise to those who may be interested in the simpler things of life and who in order to attain health are willing to sacrifice, to some extent, the luxuries of the table and the whims of the appetite, which in many instances reflect an abnormal craving, stimulated by condiments (refined sugar, syrup, candy, salt, pepper, meat sauces, horseradish, mustard, and many others). The result of such a false appetite is an overloaded stomach and severely taxed liver, heart, and kidneys, often culminating in

hardening of the arteries (arteriosclerosis), earthy deposits on the valves of the heart, and fatty degeneration, and the generation of such diseases as cerebral hemorrhage, thrombosis,* embolism,† bright's disease, diabetes, gastritis, rheumatism, constipation, etc.

Those people who are interested in avoiding such ailments or diseases have it in their power, I believe, to do so; and even when these diseases are established, to minimize their effects by proper living, environment and normal social relations.

With this in mind I have written the following pages in the briefest, simplest, and clearest language at my command, making no attempt to cover fully the various subjects treated, but contenting myself by attempting merely to direct the reader in the proper line of thought towards a wise selection of foods and the correct method of preparing and eating them.

* Thrombosis is the obstruction of a blood vessel by a clot formed at the point of obstruction.

† Embolism is the obstruction of a blood vessel by a clot or some foreign body brought from a distance.

CHAPTER I

MAN'S PRIMITIVE DIET

There is quite a growing agitation and tendency towards the proper way of living in order to develop the physical side of man, so that he may overcome the deficiencies exposed by the physical tests made during the war, to the end that his body may be more resistant to the invasion of disease-producing microbes and bacteria.

The foundation for developing a normal body lies in the quality of the material absorbed from the air we breathe, the water we drink, and the food we eat.

Though there seems to be some differences of opinion, we have arrived at the following conclusions after years of research and experiences with actual tests on all classes of people (invalids, adults, children, and those who work with muscle and others who use the brain power most).

First, we studied the advent of man upon earth. We found him in the Garden of Eden. This suggested to our minds

that his advent must have been premeditated and his environment completed before his arrival; his abode being ideally arranged in the most favorable climate, and surrounded by those influences which would tend to the development of a physically perfect manhood, so that he could maintain himself in the vigor and energy necessary to produce and perpetuate his kind, in perfect type and beauty.

Man was placed in the midst of all the essential elements in the way of food, air, and water that his Maker concluded were best adapted to nourish him. His body was constructed so as to be particularly responsive to the stimulating and regulating influences of such food and surroundings.

He had no knowledge of fire or other means of preparing his food. It is well known that there were many varieties of fruit in his environment; and so far as we have been able to determine from the various descriptions and expressed opinions, there were vegetables, nuts, and seed-bear-

ing plants (the latter evidently grain) at his disposal; and as there was to be no shedding of blood (Genesis 9:4. "But flesh with the life thereof, which is the blood thereof, shall ye not eat"), we conclude that fruit, vegetables, nuts, and grains are the sources to which man should look for those elements from which to select the most natural, healthful, and economical foods.

Such foods are economical not only in cost and the time consumed in preparing them, but in the effort to obtain them, as they can be produced in sufficient quantities once or twice each year in all parts of the world where man is found.

These foods are the natural stimulants and are necessary to the normal physiological functioning of the body. They do not generate poisons (purins, ptomains, or other toxins) as do foods from animal sources.

CHAPTER II

MEAT AN UNNATURAL DIET FOR MAN

There are many facts, which when studied, show conclusively that the human organism was not intended for the consumption of animal foods.

Such evidence is obtained from a comparative study of the anatomical and physiological construction of the human mouth and the mouths of animals.

The mouths of men and of non-meat-eating animals exhibit the side motion of the lower jaw—a movement which we find in no flesh-eating animal. The teeth approach each other so that the grinding surfaces are properly approximated for their work; while the jaws of the meat-eating animals come together like a pair of scissors, the upper teeth coming in contact with the outer surface of the teeth in the lower jaw. The molars, or back teeth, largely predominate in man and all non-flesh-eating animals, and are evidently intended for grinding grains, nuts, etc. The incisors, or sharp front teeth, are next

numerous, and are designed for eating fruits, vegetables, and—in the case of the animals—for grazing or nipping grass. Last, and in man very rudimentary, are the canine teeth, which more nearly resemble our own molars than they do the canine teeth of the flesh-eating animals. These teeth are principally used in masticating or crushing hard substances such as nuts, fibres, etc. Since no tooth in man resembles any of the teeth found in flesh-eating animals, it seems evident that flesh was not intended for human consumption.

Further evidence is furnished by a study of the fluids of the mouth. In man, these contain digestive ferments, or enzyme, which act principally upon starch and sugar, and should be neutral in reaction; while the fluids of the mouths of flesh-eating animals have an acid reaction and react chiefly upon flesh. In other words, the digestive fluids of the mouth in man are not designed for acting upon flesh.

Moreover, flesh-eating animals will eat meat in any stage of decay, experiencing

no inconvenience, while man suffers from ptomain poison and other toxins even when the meat consumed is in the freshest possible state and has been sterilized by cooking.

Another evidence that man should not eat animal food is that the animals most resembling man in their physical and physiological functions (the anthropoid apes), never eat meat but live entirely upon nuts, fruits, and vegetables.

Some interesting experiments were made recently as to the effect of meat upon chimpanzees. These animals would not eat the meat, but pushed it aside. When meat was disguised in chopped bananas, they ate it unwittingly, with the result that all of them showed symptoms of toxic poisoning within forty-eight hours.

Laboratory tests have shown that the blood of the anthropoid apes is identical with that of man.

There seems to be a tendency of all nature to indicate that man is by nature a non-meat-eating animal, as those animals

which do not eat flesh are most sought after as food for man, and these animals live upon the same natural products of the earth, which seem to have been found in man's original environment.

Many of the herbivorous animals seem to be stronger and more enduring than the meat-eating animals. What flesh-eating animal can show the endurance of the camel or of the elephant? The sturdy, long-enduring, intelligent race horse, with the stamina and ability to finish strong, is sufficient evidence that his food supplies him with the strength, intelligence, and endurance demanded. Similar food should meet man's requirements.

The very fact that the human body is the most wonderful chemical laboratory imaginable is in itself evidence that it can do its work far better than the finest laboratory ever devised by man, and all this marvelous laboratory within us asks is to be supplied with the natural raw materials so abundantly provided by all nature in order that it may select from these the

vital elements in their proper proportions.

The chemical reaction that transmutes raw materials (non-flesh food) into flesh is essential to the health of the body. When we eat meat we eat a raw food that has been transmuted into flesh. We lose the forces (gases, ethers, etc., produced by the chemical reaction of the body in converting the raw material into flesh) which are essential to the normal development of nuclear or cell life, and which may be supplying the very power necessary to keep the vital spark going to maintain the body to the highest degree of efficiency. This being the case, we can readily see that in eating animal food we obtain only the end result, or by-product, which the living animal has robbed of the vital, life-giving elements necessary for normal health and development.

At a recent meeting of the American Health Association held in Chicago, there were exhibited various specimens of meat that showed evidence of disease. Some were taken from the choice cuts of beef,

pork, lamb, etc., offered for sale at the highest class meat markets. No doubt many such specimens or even worse are sold every day somewhere in the United States and consumed as food. These specimens showed plainly the evidence of tuberculosis, foot and mouth disease, trichina, etc. It is self-evident that when one eats meat he takes a chance of infection with some of these toxins, even though the meat is sterilized by cooking. One does not like the idea of eating the flesh of diseased animals, and it is not necessary to eat meat to maintain a healthy body, to feel fit.

The experiments conducted at Yale in 1907 by Prof. Chittenden and reported in the "Yale Medical Journal" of that year are very convincing, and demonstrate conclusively the advantage of abstaining from meat in the diet.

In these experiments the non-meat-eaters far outclassed their rivals, the meat-eaters, in every contest, the former showing more endurance and strength to labor,

and doing it with greater ease, winning every athletic contest in which they engaged. In mental calculation they displayed quicker perception and easier concentration. These winners were not only abstainers from meat but were also light eaters.

It is surprising with what ease one can stand severe physical strain on a whole grain, vegetable, fruit, and nut diet without displaying the usual sore and stiff muscles the following day, though he has been unaccustomed to such strenuous and laborious work.

CHAPTER III

VITAMINES ESSENTIAL TO LIFE

It is an undisputed fact that man could live but a short time on animal food alone. The most recent proof of this is the frightful condition that existed among the crew of "The Crown Prince Wilhelm," the German raider, which was forced to our shores by sickness of the crew during the recent world war.

Alfred W. McCann gives the story in his book, "Science of Eating." This crew of five hundred men had been out 255 days, during which time they sank fourteen merchantmen, from which they took fresh meat, sugar, white flour, polished rice, sweet cakes, syrup, etc., in great quantities.

They considered that they had the most ideal food supply, and were amazed and horror-stricken when the men became ill with some unknown malady, causing their feet to swell and become painful, some losing the use of their limbs. Of the crew 110 were seriously ill, and all were more or less affected.

It was finally discovered that the use of polished rice, white flour, meat, and sugar was the cause of their trouble. All of these grain foods lacked the earthy salts and vitamins, which had been removed by milling the flour, polishing the rice, and refining the sugar and syrup. The live animal in producing its flesh, which the crew ate, had appropriated all the earthy salts and vitamins.

Not only this, but the white, bleached flour, polished rice, refined sugar and syrup produced an acid reaction in the body, owing to the fact that the alkaline bases which the whole grain contained and which would have prevented the acid reaction, had been removed with the bran and middlings in the process of making the white flour, polishing the rice, and in refining and bleaching the sugar and syrup. The proof of the above conclusion lies in the fact that all of these men recovered when given bran and vegetable waters. (For formula for preparing the bran and vegetable waters, see page 30) These

waters contained the soluble, earthy salts and vitamins, which had been removed from the diet of the raiders, and which when supplied in large quantities restored them to health.

The United States Government issues a bulletin, entitled "Bread as Food," Reprint No. 333, Public Health Reports. This bulletin describes experiments with poultry and pigeons with food in which these earthy salts and vitamins had been removed. Chickens fed on polished rice alone for six weeks died; those fed on natural unpolished rice lived and did well; those made sick on polished rice recovered rapidly when fed the whole natural rice.

A more recent and impressive proof of the importance of these soluble, earthy salts and vitamins in the diet of children comes from my personal experience in treating a three months' old baby, which judging from all appearances and her actions, was at the point of death.

A more emaciated child it would be hard to imagine. She had been treated for mal-

nutrition, marasmus, and tuberculosis with but ill effect to her, and she looked as if she might have been suffering from any or all of these diseases. She weighed two pounds less than when she was born; her bowels were inactive and fearfully constipated, the mother having to use the handle of a small spoon to remove the fæces from the rectum, which was prolapsed and protruded about one-half inch.

After going over her history, and learning that she was a bottle-fed baby, I discovered that the cow from which the baby received her milk had not been fresh for two years. I decided she was starving to death from lack of earthy salts and vitamins. She was restless, colicky, and when quiet would lie with the eyes rolled up, showing the white or sclera. This baby showed decided improvement in the first twenty-four hours after having been given alternately bran and vegetable waters. These foods were rich in soluble, earthy salts and vitamins. This improvement continued noticeably until about one week

later, when several large boils made their appearance on her head, neck, and face. Her feet were swollen somewhat, and the urine scanty. More water and good milk were added in preparing the bran and vegetable waters. Ten weeks later she had gained two and three-quarters pounds, she was sleeping well all night, had no signs of colic, was happy and very seldom cried. In fact, the father said to me, "I think she never has an ache or a pain."

This case, to my mind, is one of the strongest proofs of the importance of proper food for children, and the vital necessity of the natural supply of soluble earthy salts and vitamins. Through these bran and vegetable waters, the child was only receiving the foods she would have obtained had her mother been nursing her and eating those cereals, fruits, and the six or eight vegetables that were used in preparing the bran and vegetable waters.

We could recite many similar cases were it necessary. After all, vegetables,

cereals, fruits, and nuts are the source of all soluble salts, fats, sugars, etc., found in mother's milk. Especially is this the case in regard to cow's milk.

It is a known fact that all food elements must first be organized by the vegetable kingdom before they can be assimilated by the body, and this process of organization, or chemical reaction, takes place in the plant principally at the mouth of the rootlet and in the circulation of the roots (the stomach), and is finished in the foliage (or lungs) before the sap is converted by the metabolism of the plant into the fibre, fruit, etc.

The earthy salts are found in the body in the same organized form as in grains, vegetables, nuts, and fruits, and cannot be produced by man, or extracted from the grains, vegetables, nuts, and fruits in the same organized form as found in man.

One can readily see the folly of taking iron, potash, lime, phosphate, etc., which are manufactured by the chemist as food or tonics and which are not organized by

vegetables, etc. If these salts are needed they should be taken as food by eating the vegetables, fruits, grains, and nuts which contain them; otherwise the body cannot use them, but is given an extra burden in throwing them off.

In fact, it is no longer a question that grains when prepared for food should contain all of the natural food elements of whole grain. Whenever a food is lacking in these earthy salts and vitamins, it is simply making trouble for the consumer.

Food experts and writers on health, who have given the subject of diet and food serious consideration are unanimous in this opinion.

If you will consult Dr. H. W. Wiley's book on "Food Adulteration," you will find that he gives up Section 13 entirely to the importance of vitamins. Susan Harding Rummel, Ph. B., in her book, "Natural Food and Care of Child and Mother" (which, by the way, should be in every home) strongly advocates the use of

whole grains and natural sugar, with no salt or refined sugar in the preparation of foods.

My own conclusions in regard to man and his physical welfare as to disease and health, based upon years of private practice, institutional work, public health and food research, are that man is largely to blame for his ills and improper physical development, and to a large extent for evil social surroundings.

CHAPTER IV

THE PROPER DIET

A diet to be ideal for man must be rich in the elements of which the body is composed. Of seventy known elements only about seventeen occur in man, and I am giving a table of the relative proportions in which these seventeen occur.

	Per cent.
Oxygen	72.0
Carbon	13.5
Hydrogen	9.1
Nitrogen	2.5
Calcium	1.3
Phosphorus	1.15
Sulphur	.1476
Sodium	.1
Chlorine	.085
Fluorine	.08
Potassium	.026
Iron	.01
Magnesium	.0012
Silicon	.0002
Traces of copper, lead, and aluminum.	

Analyses of grains, vegetables, fruits, and nuts show the same elements in almost the same proportions as they are found in the human body.

For all people we would recommend the use of such foods only as are produced by the earth, either as tubers grown in the

ground, or the products of plants, vines, bushes, or trees. These products represent all the essentials of which the body is composed and in well-balanced proportions, when the whole product is used in preparing them for food.

That is to say, in the case of grains, the flour or meal should be ground from the whole wheat, rye, barley, oats, or corn. Nothing should be removed. Rolled oats should contain the bran layer, germ and all. Wheat and other flours should also contain the bran, germ and all. Corn products such as corn meal, corn flakes, and corn flour should contain the entire corn grain, including the outside hull and germ. Breakfast cereals should be made of the whole grain only.

Potatoes prepared with the skins on are to be recommended (either boiled or baked). Carrots, parsnips, rhubarb, and the like should be prepared with the skins on. It is scarcely necessary to state that vegetables should be thoroughly scrubbed and all defective spots removed before cooking.

In rice pudding, or whenever rice is used, the whole, natural, or brown rice is recommended.

Fruits are always best prepared with the skins on. The flavor is better, and, as stated before, the earthy salts and vitamins are found under the skins, and in and about the seeds. They require scrubbing, and defective spots should be removed the same as with vegetables.

Oils and butterine made from grains, vegetables and nuts are to be recommended in preference to animal products for cooking, baking and for table use. These are cleaner and more wholesome and equally palatable.

We believe salt should be used very sparingly, if at all, and the less refined sugar used the better. Only natural fruit sugar, such as honey, sap syrups, made without bleaching or using chemicals, can be recommended. The sap of the sugar cane or maple, boiled down into a syrup, is the best syrup for use. There are many other sources from which sugar and syrup

can be made which are not only more wholesome but more tasty than refined sugars or syrups.

We have been using cereal and vegetable waters for bottle-fed babies made as follows:

The whole grain flours or bran in the proportions of two and one-half pounds of cereal to seven pounds of water kept at a temperature of 150° for ten hours. The last half hour, however, the temperature is increased to 175° , then the liquid is strained through a fine mesh cheesecloth or thin muslin.

Vegetable water: After thoroughly scrubbing and removing defective spots, chop fine potatoes, carrots, beets, parsnips, cabbage, cauliflower, celery, turnips, etc. Cover with cold water, using same proportions as used for the cereal water and allow to come slowly to a temperature of 150° to 175° and soak or macerate for five hours, then strain through cheesecloth as above. These waters should be kept in separate bottles

that have been thoroughly washed and scalded and well corked, the cork also having been scalded.

When given to a child in a nursing bottle with milk or other food, or alone, these cereal and vegetable waters can be made in equal proportions. This is good not only for babies but invalids suffering from gastric troubles, cancer, tuberculosis, etc. The result of this diet has been very gratifying indeed.

The ideal diet for the expectant mother is those foods which will supply her body with all the elements (about nineteen) of which it is composed and in larger proportions than she usually needs (but free from toxins or other poisons) because of the extra development that is taking place.

From what source do these elements, carbohydrates, proteins, earthy salts, vitamins, fats, and sugar come? They are found in best proportions and most assimilable form in whole grains, vegetables, fruits, and nuts, such as:

The Grains: Wheat, barley, rye, oats, rice and corn.

Vegetables: Potatoes, beets, beans, cabbage, carrots, peas, celery, spinach, Swiss chard, lettuce, cauliflower, turnips, radishes, Hubbard squash and many others, though the foregoing are the most important.

Fruits, especially the sub-acid and sweet fruits, such as dates, raisins, figs, bananas, prunes, pineapples, oranges, grapefruit, grapes, peaches, pears, cherries, berries, and others.

Nuts: English walnuts, hickory nuts (shellbarks), Brazil or cream nuts, coconuts, chestnuts, and peanuts.

These will not only supply the most perfect raw material as food for our bodies, but nature produces them in every thickly-inhabited part of the world, at least once in every twelve months and in quantities sufficient for all demands.

Nutrition furnishes the life-giving principles of the body and when furnished

from the best (pure) water and food it develops robust and vigorous minds and bodies. Upon the quality of air, water and food taken depends the ability of the body to resist disease and supply vigor and strength.

You can build a good house only out of good materials. Whenever a poor piece of lumber is put into your house it is weakened at that point.

It is not logical to suppose that all parts or organs of the body were not intended to be equally strong and enduring.

The only reason for the teeth giving out (decaying) and the eyesight failing, is that the proper material has not been furnished the body (in air, water and food) to properly develop them.

The great French authority, Charcot, said a few years ago, "Ninety per cent. of all diseases originate in the intestinal tract."

Food should be so thoroughly masticated that the saliva may be completely mixed with the finely-ground bolus* of

*A mass of masticated food ready to swallow.

foods so that the digestive enzyme, or ferment, can act on each little particle of food, converting the starch and sugar into maltose or partially-digested starch and sugar. The water of the saliva saturates and softens the food and as it carries with it into the food the digestive principles, we can see why this fluid should not be diluted in the mouth, by drinking water or other liquids while we masticate. Water should be taken frequently, preferably between meals, for our systems require more clean, pure water than food.

Pure air is another very important requirement. We need more air than either food or water. If the air and water are free from contamination the food usually will be also.

CHAPTER V

FASTING AND RESTING ESSENTIAL TO HEALTH

The best and quickest way for a person tired from labor with muscle or brain to recuperate, is rest; this also applies to the weary, nervous system, over-burdened stomach, kidney, heart or other organ.

These organs need rest, not work. Frequent fasting for twenty-four to seventy-two hours, drinking plenty of clean, soft water, with high flushing of the lower bowel, will place such people among the physically fit.

Nature provides us sufficient examples of this in the animal kingdom. The first evidence we have that an animal is sick is in its refusal to eat and its lying down to rest.

Edison says, "The trouble with Americans is they eat too much. We eat about three times as much as is good for us"; and he proves it by eating only 1½ pounds of food per day. Should we follow his example we would have no occasion to

dread the horrors of bright's disease, diabetes, thrombosis, hardening of the arteries, heart trouble, cerebral hemorrhage, acidosis and the like. In fact, the mighty microbe of epidemics would have little effect upon us, as they find little encouragement and less to live upon in a healthy body.

Eating too much and too often is the most pernicious habit into which we can fall. It usually results in overweight, though sometimes in underweight. It has been said that every fat person is an invalid. I quite agree with that opinion. Some people weigh too much. Why? Because they eat too much or too frequently. You have often heard it remarked, "I am inclined to grow stout." A more accurate statement would be, "I need less food than most people." This is sometimes the case. Some people develop more energy and can work harder on a smaller amount of food than is required by the average person. Such people should eat only enough to

meet the demands of the body; when they go beyond this the food is stored up in the body as fat; soon they are overweight. (See table, page 42) Our bodies are like gasoline engines; some engines require less gas per mile than others, though they are both pulling an equal load.

In health and with normal weight, the body retains a reserve force as food supply, then the body is always prepared for any emergency and when the demand comes it can take care of itself for many days without eating, but must be furnished with a liberal supply of good, clean water. The reserve food supply is invariably sufficient to meet the demands if we only use it properly.

Fasting and resting are synonymous: we are less active physically or mentally, needing less food. Fasting should become a habit with us all, in order to consume the reserve supply, thus preventing the accumulation of earthy salts in the walls of the arteries and valves of the heart and using up the excess of proteins and fat so

that we may take on a new or fresh supply, thereby keeping the spark of youth in our bodies as long as possible by repeating the process of tearing down and rebuilding; this is what happens when we fast occasionally.

On the other hand, if we keep piling up the reserve, in time the body will have reached its limit, then the accumulation can no longer be accommodated without developing trouble, producing friction; the organism is overloaded, and we suffer from rheumatism, kidney, liver, heart or stomach and intestinal troubles.

Again, if our food is lacking in the right materials, or embodies excess of some one of the bodily elements, we are made ill, resulting possibly in abnormal growths, cancer, and the like.

More people eat themselves to death than die by starvation or accident, and it has been proved that many diseases can be cured by fasting and proper diet. We should eat at regular intervals of from five to ten hours. Food taken between

meals is like disturbing a person in his rest (sleep). The alimentary canal should have its rest so that it may properly prepare itself for the work of digesting and absorbing the next meal.

Do not feed your children between meals on the assumption that they are growing and need it. It is not quantity of food that they need, but quality; and it should be taken at regular intervals, and be slowly and thoroughly masticated.

The meek and lowly Nazarene set us an example by fasting in the wilderness of Judea for forty days and nights.

A glance at the history of nations is interesting in showing the effects of diet upon the intelligence and physical development of their peoples.

The Greeks when they ruled the world and produced the bodies that were models for artists and sculptors ate only two meals a day. The Persians at the zenith of their power ate but one meal a day. The downfall of both these people started from the date when they departed from

one and two meals a day and entered on the road to destruction through their gluttony. The Chinese who have been one people and one nation from time immemorial have lived throughout all these years upon whole rice and other vegetables as the principal part of their diet.

It is reported that Louis Cornare, who lived some three hundred years ago, at the age of forty, being broken in body and mind, was given up to die in a few months. He began living on twelve ounces of food a day and cured himself in twelve months. At the age of eighty-four he wrote the first of the five volumes of his famous treatises, "The Temperate Life," and the last volume appeared in his ninety-first year. He died in 1566 at the ripe old age of one hundred and three.

It is well known to some professional men, ministers, physicians, and lawyers that they can lecture easier, preach better, or make a more convincing plea after they have fasted for twenty-four hours.

Yoe's Physiology contains a table giving the estimated loss of the various tissues in the body of starving animals, which is as follows:

	Per cent.
Fat	97
Spleen	63
Liver	56
Muscle	30
Blood	17
Nerve Center	00

The table proves that the brain and nervous system are fed by the fat, glands, muscles, etc., and retain their normal activity to the last.

As we have said, animals never eat when sick and after the intestines cleanse themselves and there is no further source of infection and the vital organs have rested, the vital powers within the body restore it to health because, as Yoe's table shows, the nerve centers retain their natural activity to the last.

We should endeavor to maintain the normal weight of the body as shown in the following table:

Standard Heights, Weights, and Lung Capacities

HEIGHT	MEN		WOMEN		Age	WEIGHT	
	Weight	Lung Capacity	Weight	Lung Capacity		Boys	Girls
		cu. in.		cu. in.			
5 ft. 0 in.	120	200	114	140	5	45	40
5 ft. 1 in.	124	208	118	146	6	50	43
5 ft. 2 in.	128	216	123	152	7	53	47
5 ft. 3 in.	132	224	126	158	8	57	52
5 ft. 4 in.	136	232	129	166	9	62	57
5 ft. 5 in.	140	240	133	172	10	67	62
5 ft. 6 in.	144	248	137	178	11	72	69
5 ft. 7 in.	150	256	142	184	12	78	78
5 ft. 8 in.	156	264	146	190	13	85	89
5 ft. 9 in.	162	272	150	196	14	93	98
5 ft. 10 in.	168	280	154	202	15	105	106
5 ft. 11 in.	174	288	158	208	16	118	114
6 ft. 0 in.	180	296	162	216			
6 ft. 1 in.	186	304	166	222			
6 ft. 2 in.	192	312	170	230			
6 ft. 3 in.	198	320	175	236			

CHAPTER VI

THE UNFIT RECLAIMED

The physical examinations made by the draft boards made apparent the fact that a vast number of young men in America were, and in many cases still are, physically unfit.

Why is this? The answer is poor or abnormal development, unwise or evil habits, wrong environments, improper food, or constitutional diseases acquired or inherited. Inherited predisposition to disease is much less frequent, I believe, than is usually supposed.

How are we to remedy this condition? The answer is self-evident: diet (proper food), wise habits, improved environment, and greater thought to our life mates, that they may be free from social and constitutional disease.

The following example will illustrate how one unfit young man was reclaimed and made fit.

Soon after the United States entered the war, a young man came to me for a

physical examination, stating that he was anxious to get into the air service, but that though he had made an effort he had been rejected.

Upon examination I found an irregular heart action, poor chest expansion, coated tongue and constipation, but I could find no organic trouble that would unfit him for service.

I assured him that there was no organic trouble, and that I believed that if he would follow instructions he would be able to pass the next test.

He was put on a strict whole grain, vegetable, and fruit diet, with plenty of clean water. I instructed him in a system of exercises, similar to that of the army regime, and told him to report in a few days, at the end of which time he was very much improved. In fact, so much so that he was assured that if he continued to show as much improvement at the end of the next ten days he could try the examination again.

This he did just twenty-one days from his first examination, and passed in fine shape, but his examination this time was for the hospital corps instead of the aviation service.

In these few weeks his heart trouble had disappeared, his tongue had cleared, and his bowels had become normal, all of which of course increased his lung expansion.

I cannot better close this chapter than by appending the cablegram from London, England, which certainly seems to confirm all that I have said regarding dietetics. The cablegram follows:

LONDON, MARCH 27.—Inoculated with the most virulent germs, including anthrax, the scourge which has made terrible inroads during the last few years, William Aird, of Somp-ting, Sussex, has startled the medical world by curing himself with natural foods.

He allowed himself to be inoculated to prove his assertion. He has suffered no harm. His only medicines

have been fresh, uncooked fruits and vegetables.

"Disease," he told a correspondent who visited him, "is not an accident that cannot be avoided. It is a curative process. The germs which we think are our bitter enemies are really our friends.

"By eating these simple foods, cancer, epilepsy and other so-called incurable diseases can be effectively and permanently cured."

Medical men are intensely interested in Aird's statements and are carefully investigating his experiments.

CHAPTER VII

ENVIRONMENT

There is no doubt in my mind that if man would be more careful of his environment, food, and social relations, he would live longer, feel better, and be happier.

In order for it to be possible for man to enjoy life, he must have a strong, healthy body; yes, be well bred, if you please; but as we usually consider the term this is not essential.

One may be born under the most humble circumstances and in poverty, but by the right influences and food (the latter being the prime essential) he can develop a wonderful physique and character. Give him sanitary surroundings, pure air, a clean abode, good water and proper food, and Nature will do her best to yield a perfect specimen of humanity. This is as simple as A. B. C. We have heard it before, but how many have given serious consideration to the hygiene of the home and its environments?

What in your neighborhood do you know that is contaminating the atmosphere, water, or food? Could this contaminating influence be removed? From what source does the water that you use come? Is the milk you use produced and purveyed under sanitary conditions? What of the personnel employed in caring for and delivering it? The farmer can and usually does do his share, but what happens after the milk leaves his hands?

What about your food? How is it handled? Are the stores, clerks and delivery men sanitary? Do all who touch your food have clean hands and clothing? Are they free from systemic diseases? Has a single one of them come from a home where there is a contagious or infectious disease? If these questions cannot be answered satisfactorily, procure your food from another source, or insist that at least the worst of the evil conditions be removed. Clean hands and clothing and handling food with other means than the bare hands should be the habit of all merchants, and

should be insisted upon by all their patrons. The medium of delivery should be clean; dirty delivery wagons render the foregoing precautions useless.

What about the care of the food in the home? Is your house clean and sanitary? Is there plenty of fresh air and sunshine in your house from attic to cellar? Is the cellar clean, well aired and dry; does the sunshine ever get into it? Windows are as essential in the cellar as anywhere else in the house. The cellar should be as sanitary and dry as it can be made. Cupboards should be well cared for and refrigerators thoroughly cleansed, for in case the food is not put into a sanitary place it will quickly become contaminated. It is important to keep caps on milk bottles at all times for this reason.

All such care and forethought in securing and preparing foods under absolutely sanitary conditions goes for naught if proper foods are not selected in the first place. What does it avail a man to take

such care of his food when he selects food that was never intended for human consumption?

An insanitary or dirty city, town, village or rural community is a reflection upon the intelligence of its citizens. These are always the victims of their own indifference, either through not properly attending to such things themselves, or through their permitting a corrupt municipal government to neglect the community affairs for which they are paid to attend.

There is no legitimate reason why any city should be insanitary. There is no excuse for dirty streets, homes, or children; for impure water or an inadequate sewerage system.

Some of the beautiful cities on the Pacific slope (especially Portland, Oregon and Seattle, Washington), where they take pride in their clean streets, beautiful playgrounds for children, and neat and tidy, though humble, homes for their workers, illustrate what can be done along these lines.

In these cities fish, fruit, and vegetable markets were a revelation to me for cleanliness; and I was informed by an officer of one of these cities that his municipality was spending no more money to maintain a clean city than it spent five years before under another administration when the city was dirty and unsightly. He said it was easy; all that was necessary was to instruct the police department to see that those responsible, in the past, for dirty streets must keep them clean. Those responsible for clean streets should not, as heretofore, neglect their duty.

An efficient vigilance committee, composed principally of women, co-operated with the police department. Suitable receptacles were provided for waste paper, decayed fruit and other refuse; nurses visited the poorer sections to instruct the ignorant how to keep clean and sanitary; others taught good housekeeping, economical buying, and that was all there was to it.

CHAPTER VIII

BIRD AND TREE LIFE AS FACTORS IN THE
HEALTH OF THE COMMUNITY

Few men have done more for humanity than Audubon in his great campaign for the protection of bird life. The good the society which bears his name accomplishes each year is beyond calculation, for our very existence depends upon bird life.

Were it not for the continuous warfare of our birds upon insect life, the latter would completely destroy vegetation; therefore it behooves us to protect our birds and assist them to increase their numbers by every possible means.

This brings us to another subject equally important to the health and life of man. It has a direct relation to bird life, for it is tree life that furnishes protection and homes for the birds.

Trees supply man with many essential elements in the ozone, oxygen and other gases exhaled from their foliage (lungs).

At the same time poison gases thrown off by man are absorbed by the trees.

These gases stimulate tree growth and life, and give color to the foliage.

Miasmatic poisons found in and about marshes, low lands and along streams produce diseases in man. Such poisons are absorbed and destroyed by trees; and no doubt the destruction of our trees and forests have a direct bearing in lowering our resistance to epidemic diseases.

I wish that I could impress these facts upon every one who reads these pages so that they would resolve to prevent the destruction of any tree, unless it is absolutely necessary.

Each person should determine to plant, at least, one tree every year and as many more as practicable. Every available space around a home that is not needed for producing food or flowers should bear a tree. Our slogan should be "plant or save a tree each year."

I wish to make a strong plea to every property owner, boy scout, and others in behalf of "tree culture," and particularly that of nut trees. Plant nut trees in every

available space. Our parks should contain some, not only for their beauty and shade, but for their product. Nut trees, besides being profitable and furnishing healthful, nutritious food, add to the beauty of our surroundings, and provide homes and protection to the birds which destroy the insects—their food and our enemies.

What is more beautiful or cheering than flowers? The simplest of our garden or household plants have been sufficient to inspire the greatest of our poets.

Flowers help to clear away the cobwebs of depression. When one becomes interested in producing fine roses, carnations, dahlias, peonies, pansies, etc., he forgets the annoyances and worries of life, and is gaining strength physically and mentally.

Happy is the man who has a hobby for flower or garden culture or a fancy for raising pigeons, chickens, bees, etc.—who interests himself in photography, woodcraft, pottery or any of the arts.

CHAPTER IX

HEALTH AND HAPPINESS

Health is the normal physiological functioning of the body. In perfect health our lungs destroy the microbes that enter the body by this route; good digestion through normal gastric action destroys microbes entering the stomach with the food, good liver and intestinal function protects the intestines from undesirable tenants.

We believe that man has it in his power to overcome 90 per cent. of his present day ills, if he will but give his body one-half the care and serious thought he does his bank account; or, in other words, if he will look after his environment, water, food, recreation, social relations and treat his fellow-man as he should wish his fellow-man to treat him.

Evil thoughts, with their resultant actions, cannot develop in a well-balanced mind.

The forces within the body are the energies which heal and restore it to health.

The influence of the mind over the body cannot be denied; fear increases the heart action and may produce spasm or relaxation of the muscular system; it likewise produces jaundice and other diseases.

A dozen spoken or written words may produce joy and happiness, or drive one into frenzy.

We generally get out of life just what we have put into it. If we sow sunshine, friendship and contentment we reap the same.

How miserably unhappy one becomes by continually brooding over the mistakes or the misfortunes of life, and envying others their possessions. The chances are, if it were known, you have more to be thankful for and less to worry about than those you envy. From the sandal tree which perfumes the axe which lays it low can we not learn to love even our enemies, and as far as in us lies to return good for evil?

Happiness and contentment depend upon the following:

1. The fear of God and the association with God-fearing people.

2. Good health. If you have good health, appreciate it; if not, take steps to improve your health.

3. Voluntary service to others.

4. Falling in love with your occupation and doing your best.

5. Keeping your conscience clear, and treating others as you would they would treat you.

6. Not undervaluing yourself or your possessions.

7. Not having a too exalted opinion of yourself and your possessions.

8. Being friendly and affable to all.

9. Being slow to wrath and quick to forgive.

10. Expecting disappointments and appreciating their teaching when they come.

Seneca says, "A good man can never be miserable, nor a wicked man happy."

Lord Bacon remarks, "It was a high saying of Seneca, That good things that

belong to prosperity are to be wished; but the good things that belong to adversity are to be admired."

"Wisdom," says Seneca, "is a right understanding, a faculty of discerning good from evil; what is to be chosen, and what rejected; a judgment grounded upon the value of things, and not the common opinion of them." And again he says, "Poverty to a wise man is rather a blessing than a misfortune."

Lord Bacon says, "The virtue of prosperity is temperance, the virtue of adversity is fortitude." Again he says, "Prosperity is not without many fears and distresses; and adversity is not without comfort and hopes."

At a dinner recently given to former Senator Chauncey M. Depew upon the occasion of his eighty-first birthday, the famous octogenarian, according to the newspaper accounts, "told how the chance remark of a friend who had lost his all in the panic of 1873 had inspired and encouraged him in the 'down' times of his

ups and downs. This man, cocking his hat back on his head, had taken a deep breath and said, 'Chauncey, the world has always gone around and it always will go around.' That, Mr. Depew said, had been his philosophy ever since.

"Happily for the United States, he said, it had three practical idealists, Washington, Lincoln, and Roosevelt."

Conviction comes from experience, and we believe any one who is not 100 per cent. physically perfect will be convinced that proper eating and right living will make him so.

"All work and no play makes Jack a dull boy," has been wisely said. Recreation is as necessary as bread and butter. There are those who can keep everlastingly at it and apparently do not show the strain, but this is not the case with most of us.

A few weeks spent every year in the open next to Nature, camping, fishing, hunting, swimming, rowing, or simply lounging will materially benefit the city

dweller. A change of environment from low to high lands, or vice versa, has a stimulating effect and pulls one out of his daily routine or ruts.

JUST WAIT FOR THE THAW.

Cheer up, chillun, tho' the weather's mighty raw,
Every time dar comes a freeze, dar's gotter come
a thaw.

It takes a little patience till de freezin' time is
done,

An' if you lose yoh temper, why it doesn't help
yoh none.

Cheer up, chillun, 'cause de weather's on de move,
When de luck appears de hardest, it is certain to
improve.

Cold wave an' warm wave, dey gotter mind de
law—

Every time you gits a freeze, you gotter have a
thaw.

Cheer up, chillun, an' prepare to say "Hurrah";
De chilliest proposition by an' by is boun' to thaw.
Yoh hopes dey keeps a droppin'—don' you let it
make you frown,

Thermometers was built foh movin' up, de same as
down.

So, cheer up, chillun, 'cause you sho'ly might as
well;

We all has our troubles, an' dar's nothin' new to
tell.

Each botheration seems about de warst you ever
saw,

But every time you gits a freeze, you's gotter have
a thaw.

—*Washington Star.*

APPENDIX

The following list of foods offers a composite diet affording the earthy salts and vitamins so essential to good health. It should, however, be understood that when grains, rice, and bread are mentioned, nothing but the whole grain, natural brown rice and bread made from the whole grain, or bran bread, is meant. The vegetables and fruits should be cooked with the skins on, or when possible eaten raw, skin and all.

COMPOSITE DIET

Breakfast

Whole wheat, oats, corn, barley and other grain foods. Whole grain bread or pancakes, toast, buckwheat, rice (whole natural brown rice), natural syrups. Apples baked or raw, oranges, grapefruit, grapes, berries, pears, peaches, dates, figs, raisins, prunes, bananas. Potatoes baked or creamed. Tomatoes fried or baked. Eggs.

Luncheon

Salads composed of lettuce, water cress, or raw cabbage, and any two or more of the following fruits, vegetables or nuts: apples, cut in small pieces, carrots, cut in thin slices, ground or grated, white malaga grapes, grapefruit, tomatoes, pineapple,

ground peanuts or other nuts cut fine, celery, and the like served with a French dressing boiled or uncooked mayonnaise.

Celery, carrots, cabbage, tomatoes, cucumbers, turnips, and greens, raw or cooked. Honey, maple or other sap syrups. Bread, butter, or nut marjorines. Berries or other fruit.

Dinner

Soups, potato, tomato, vegetable (using the waters in which vegetables are cooked as a stock, with the addition of whole or natural brown rice, whole barley and parsley), lentil, bean (black, kidney or soup beans), split pea, asparagus, salsify and celery.

Egg plant fried or baked, tomatoes, fried, baked, stewed, broiled or raw. Squash, stewed, fried, baked or steamed. Apples, fried plain or in batter. (For frying use nut or vegetable oils, or nut marjorines, using as little as possible.) Hubbard squash baked. Beans, baked, stewed, creamed, either plain or with carrots. Swiss chard, lettuce, cabbage, Brussels sprouts, beets, asparagus, salsify (vegetable oyster), spinach and stewed or creamed chestnuts. Fruits of any kind. Honey or natural syrups.

There are many other vegetables, fruits, and nuts that could be added, but the foregoing are the most important.

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